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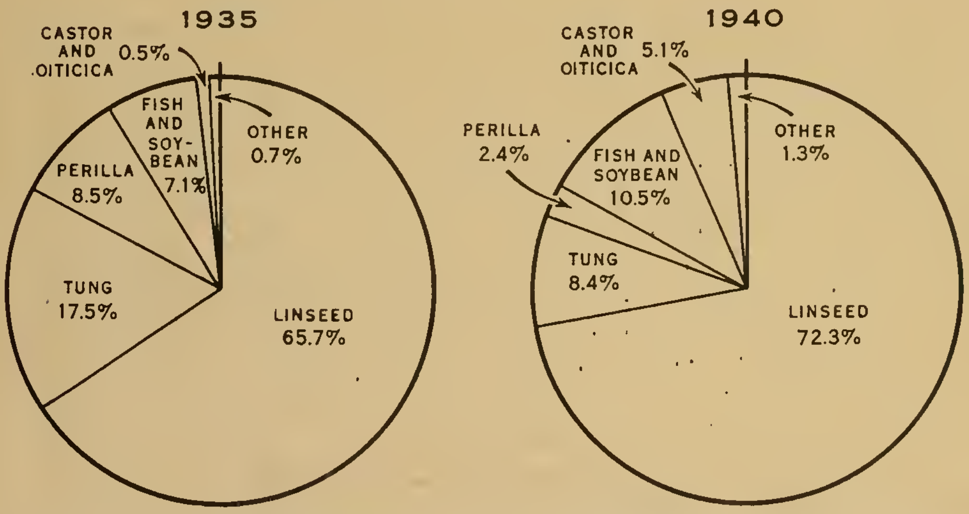
THE Fats and Oils SITUATION

BUREAU OF AGRICULTURAL ECONOMICS
UNITED STATES DEPARTMENT OF AGRICULTURE

FOS-51 BAE MAY 1941

IN THIS ISSUE:
UTILIZATION OF FATS AND OILS IN THE DRYING INDUSTRIES.

PROPORTIONS OF PRINCIPAL OILS IN TOTAL VOLUME OF FATS AND OILS USED IN DRYING INDUSTRIES*, UNITED STATES, 1935 AND 1940



TOTAL: 707,619,000 POUNDS TOTAL: 796,411,000 POUNDS

*PAINT, VARNISH, LINOLEUM, OILCLOTH, AND PRINTING INK

U. S. DEPARTMENT OF AGRICULTURE NEG. 39161 BUREAU OF AGRICULTURAL ECONOMICS

Difficulties in obtaining supplies of tung oil from China and perilla oil from Japan have resulted in marked increases in the proportion of linseed, fish, soybean, castor, oiticica, and other oils used in the drying industries. This tendency is expected to be accentuated in 1941. (For data see Table 7.)

Table 1.- Price per pound of specified fats and oils, April 1939 and 1940, February-April 1941

Item	April		1941		
	1939	1940	Feb.	Mar.	Apr.
	Cents	Cents	Cents	Cents	Cents
Butter, 92-score, Chicago	22.0	27.1	30.1	30.8	32.5
Butter, 92-score, New York	23.1	27.9	30.8	31.6	33.2
Oleomargarine, dom. veg., Chicago	14.5	15.0	14.5	14.5	14.5
Compounds (animal and veg. cooking fats), Chicago	9.2	9.4	10.5	11.1	12.4
Lard, prime steam, tierces, Chicago	6.3	6.1	6.2	7.0	8.0
Lard, refined, cartons, Chicago 1/	7.3	6.4	6.8	7.3	9.0
Oleo oil, extra, tierces, Chicago	7.5	7.0	7.0	7.2	8.9
Oleostearine, bbl., N. Y.	6.2	6.1	6.3	6.8	8.4
Tallow, edible, Chicago	5.3	5.0	5.1	6.0	7.6
Corn oil, crude, tanks, f.o.b. mills	5.9	6.2	6.6	6.6	8.3
Corn oil, refined, bbl., N. Y.	8.9	8.9	9.4	9.1	10.8
Cottonseed oil, crude, tanks, f.o.b. S.E. mills	5.5	5.9	5.3	6.4	7.9
Cottonseed oil, p.s.y., tank cars, N. Y.	6.6	6.8	6.2	7.1	8.6
Peanut oil, crude, tanks, f.o.b. mills	5.5	6.2	5.3	6.2	7.9
Peanut oil, dom. refined, bbl., N. Y.	9.0	9.3	8.5	8.8	10.6
Soybean oil, crude, tank cars, midwestern mills	4.7	5.5	5.1	6.0	7.6
Soybean oil, dom., crude, drums, N. Y.	6.3	7.2	6.8	7.9	9.2
Soybean oil, refined, drums, N. Y.	7.5	8.2	8.0	8.6	10.0
Babassu oil, tanks, f.o.b. mills, Pacific Coast	---	---	6.0	6.8	7.8
Coconut oil, crude, tanks, f.o.b. Pacific Coast 2/	5.8	5.9	6.0	6.8	8.1
Coconut oil, edible, drums, N. Y. 3/	8.2	7.8	8.0	8.8	10.4
Olive oil, edible, drums, N. Y.	25.1	25.3	42.9	46.9	53.3
Olive-oil foots, prime, drums, N. Y.	7.0	8.2	10.6	11.5	13.2
Olive oil, inedible, drums, N. Y.	11.3	12.6	30.4	30.8	35.3
Palm oil, Niger, crude, drums, N. Y. 2/	6.8	7.5	7.2	7.7	8.3
Palm oil, Sumatra, bulk, N. Y. 2/	5.7	5.5	5.2	6.6	7.8
Rape oil, refined, bbl. (drums), N. Y.	4/10.8	4/13.7	12.7	12.7	12.1
Rape oil, blown, bbl., N. Y.	14.2	17.2	17.5	17.5	17.5
Teaseed oil, crude, drums, N. Y.	9.5	12.4	17.2	17.4	18.1
Tallow, inedible, Chicago	5.0	4.5	4.5	5.4	6.8
Grease, A white, Chicago	5.1	4.6	4.6	5.5	6.9
Menhaden oil, crude, tanks, f.o.b. Baltimore	4.2	4.4	4.7	5.4	6.0
Sardine oil, crude, tanks, Pacific Coast	4.4	5.1	6.0	6.9	7.3
Whale oil, refined, bleached winter, drums, N. Y.	8.2	4/ 9.5	9.5	9.5	9.8
Linseed oil, raw, tank cars, Minneapolis	8.7	10.3	8.8	9.0	9.6
Linseed oil, raw, drums, carlots, N. Y.	9.0	10.9	9.6	10.0	10.8
Perilla oil, drums, N. Y.	4/ 9.7	4/19.9	18.1	18.2	18.2
Oiticica oil, drums, N. Y.	10.1	18.8	18.1	17.2	17.1
Tung oil, drums, N. Y.	16.0	25.4	27.6	28.6	30.0
Castor oil, dehydrated, drums, carlots, N. Y.	---	18.1	13.2	13.2	13.7
Castor oil, No. 3 bbl., N. Y.	3.4	12.8	9.8	9.8	9.9
Cod-liver oil, med. U.S.P. bbl., N.Y. (dol. per bbl.)	21.5	48.4	68.5	71.0	79.4
Cod oil, Newfoundland, bbl., N. Y.	4.3	---	8.7	9.0	9.8

Compiled from Oil, Paint and Drug Reporter, The National Provisioner, and reports of the Agricultural Marketing Service and Bureau of Labor Statistics. Prices quoted include excise taxes and duties where applicable. 1/ Reported in tubs prior to July 1940. 2/ Three-cent processing tax added to price as originally quoted. 3/ Prior to April 1941, prices for this series were given on the basis of sales in tanks, 0.75 to 1.25 cents per pound lower than the present basis of quotation (drums). 4/ Revised.

THE FATS AND OILS SITUATION

Summary

Strengthening factors in the price situation for fats and oils this year are increases in incomes of consumers, the high level of building activity, and the probability that imports of vegetable oilseeds and oils will be smaller during the remainder of the year than a year earlier despite the availability of abundant supplies of most kinds of imported fats and oils in surplus-producing areas. The growing scarcity of ocean shipping space has altered the general price outlook in the last several months. It now seems probable that prices of most fats and oils will average substantially higher in 1941 than in 1940, rather than moderately higher as indicated last fall.

No reliable indication of the probable production of domestic oilseeds in 1941 is yet available. However, it seems likely that prices of oilseeds in the 1941-42 marketing season will average higher than in the current season, even if output should be increased. The growing strength in domestic demand, plus the probability that imports will be reduced, will more than offset the effect on prices of any increase in domestic production that may take place this year. Normally, 10 to 15 percent of our total fat supply is imported.

A sharp advance in prices of fats and oils took place in March and April. Prices of animal fats and oils in April averaged 14 percent higher than in February. Prices of imported vegetable oils, already comparatively high, were up 19 percent, and prices of domestic vegetable oils were up 29 percent. The general price level for all groups in April was 24 percent higher than the relatively low prices of April 1940, and was slightly higher than the 1910-14 average, although it was still considerably below the 1924-29 average.

Despite rising prices, total consumption of primary fats and oils was 16 percent greater in the first quarter this year than last. Nearly all items shared in the increase. Notable exceptions were perilla oil and fish-liver oils, imports of which have been below average for many months. Factory production of fats and oils, as a whole, was only slightly larger in the first quarter this year than last. But stocks of primary fats and oils, which were increased considerably during the first quarter of 1940, showed little change in the first 3 months this year. And net imports of fats and oils were smaller in the first quarter this year than a year ago.

-- May 15, 1941

REVIEW OF RECENT DEVELOPMENTS

BACKGROUND.- In the summer of 1939, prices of most fats and oils were at the lowest levels since early 1934. World production of vegetable and marine oils in 1939 probably was at or near an all-time record level; foreign demand for American lard was weak. Following the outbreak of war in September 1939, prices of fats and oils in this country advanced approximately 20 percent. But most of this gain was lost during the first 8 months of 1940, when the world demand for fats was greatly weakened by the closing of important European markets.

Prices again advanced from August 1940 to February 1941, when they were restored to about the same level as in the early part of 1940. Improvement in domestic demand, decreased output of lard and greases, and rising shipping costs for imported oilseeds and oils were mainly responsible for this advance. A further gain of 6 percent in the general price level occurred in March and an even sharper gain took place in April.

Prices of fats and oils in April highest since 1937

In April, prices of fats and oils were at the highest level since 1937, a year in which domestic demand was strong and supplies of lard and greases were unusually small. Average prices of domestic fats and oils in April were roughly 8 to 50 percent higher than in February, and prices of most imported vegetable oils were 3 to 33 percent higher. Prices of perilla oil and rape oil have remained about unchanged since February, while the price of oiticica oil has shown a moderate decline.

The most striking gains from February to April occurred in prices of tallow and greases (up 50 percent), cottonseed oil, lard, peanut oil, soybean oil, oleo oil and oleostearine, palm oil, coconut oil, olive oil, corn oil, and fish oils (up 20-45 percent). The price of linseed oil advanced about 10 percent during this period, tung oil 9 percent, and butter 8 percent. The increase in the price of butter was contraseasonal.

Prices of domestic oilseeds also advanced, with a gain of 26 percent being recorded for No. 2 Yellow soybeans at Chicago and one of 10 percent for flaxseed at Minneapolis. Prices of cottonseed and peanuts, on the other hand, were only moderately higher in April than in February. The price of imported copra at Pacific Coast markets scored a gain of 65 percent between February and April, while prices of Brazilian castor beans advanced 15 percent during the same period.

Prices of food and soap fats and oils were, in general, 20 to 50 percent higher in April this year than last. Prices of drying oils, except tung oil, however, were lower than the relatively high prices that prevailed for such oils last spring. The price of edible olive oil in April this year was more than double that of a year earlier, while the price of cod-liver oil was more than 60 percent higher. Supplies of these two oils, together with tung oil, have become increasingly difficult to obtain as a result of the wars in Europe and China.

Among the oilseeds, copra prices have shown a gain of about 75 percent during the past year. Prices of soybeans at Chicago in April were about 10 percent higher than a year earlier, and farm prices of peanuts were about 3 percent higher. Prices of cottonseed, flaxseed, and castor beans, on the other hand, were 5 to 16 percent lower in April this year than last.

Despite the recent sharp advances, prices of most fats and oils are still at comparatively low levels. The general level of prices in April was moderately higher than the 1910-14 average but was more than 20 percent below the 1924-29 average.

Several factors contribute to price advances

A number of factors have contributed to the recent price gains. The demand for fats and oils in recent months has been materially strengthened by increases in industrial production and consumer incomes, a sharp rise in building activity, and Government purchases of lard for shipment to the United Kingdom. The sharp rise in shipping rates for imported vegetable oils and oilseeds resulting from the scarcity of shipping space has been an additional price-supporting factor. Production of domestic fats and oils has shown little net change. Decreased output of lard and greases so far this year has been about offset by increased factory production of butter and vegetable oils of domestic origin.

Although supplies of domestic fats and oils are, in the aggregate, about as large as they were a year earlier, increasing difficulty has been experienced in obtaining supplies from abroad. To the current domestic shortage of tung oil, olive oil, and cod-liver oil, resulting from war conditions, and the shortage of perilla oil resulting from reduced production of perilla seed in Manchuria, has been added the growing difficulty of securing cargo space for shipments of such commodities as copra and coconut oil from the Philippines. A number of British ships already have been withdrawn from American service, particularly from Pacific Ocean routes. The recent move to divert American shipping to British use undoubtedly will result in further difficulties in obtaining supplies of foreign oilseeds and oils, not only from surplus-producing areas in the Far East but possibly from Latin America as well.

Both imports and exports reduced in first quarter

Imports of tung oil, perilla oil, and copra were somewhat larger in March than in February. But reductions in imports of other vegetable oilseeds and oils resulted in a decrease in the total volume of imports in March. Total exports also were reduced in March, despite an increase in exports of lard with the unusual shipment of 10 million pounds to Japan.

For the first 3 months of 1941, imports of fats, oils, and oilseeds in terms of crude oil totaled 406 million pounds compared with 491 million pounds in the corresponding period a year earlier. The most pronounced reductions from the preceding year occurred in imports of coconut oil and copra (down 26 percent), tung oil (down 84 percent), and flaxseed (down 17 percent). These reductions were partly offset by increased imports of palm oil (up 60 percent) and castor beans (up 67 percent).

Total exports also were reduced in the first 3 months this year compared with last, mainly as a result of reduced shipments of lard and soybeans to European markets. Exports, including reexports of items imported free of tax or duty, totaled 133 million pounds in the first quarter this year compared with 146 million pounds a year earlier.

With a decrease of 85 million pounds in imports and 13 million pounds in exports, net imports were 72 million pounds smaller in the January-March period this year than last. This was a reduction of 21 percent.

Consumption of fats scores marked gain

The total domestic disappearance or consumption of primary fats and oils, excluding farm butter and farm lard, is estimated to have been 2,382 million pounds in the first quarter of 1941 compared with 2,058 million pounds in the first quarter of 1940. [1] Consumption thus was 324 million pounds or 16 percent larger in the first 3 months this year than last. The increase in consumption was accounted for largely by greater use of cottonseed oil (up 102 million pounds), inedible tallow and greases (up 69 million pounds), and linseed oil, palm oil, lard, soybean oil, and peanut oil (up 23-38 million pounds). Several other items also showed increases. Part of the increase in utilization of primary fats may have resulted from an increase in storage demand for finished products such as soap and paints.

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[1] Computed from quarterly data on factory production and stocks, Bureau of the Census, and monthly data on foreign trade, Bureau of Foreign and Domestic Commerce.

Relatively sharp declines occurred in consumption of perilla oil (down 10 million pounds) and fish-liver oils (down 8 million pounds). Less than 2 million pounds of perilla oil were consumed domestically in the first quarter this year compared with 12 million pounds in the corresponding period a year earlier and 15 million pounds 2 years earlier. Primary consumption of fish-liver oils also was at a low level, amounting only to 6 million pounds in the first 3 months of 1941 compared with 14 and 19 million pounds respectively in the corresponding periods of 1 and 2 years ago.

PRICE OUTLOOK CHANGED BY TIGHTNESS IN SHIPPING SITUATION

In the September 1940 issue of The Fats and Oils Situation, it was stated that the domestic demand for food and soap fats, and for drying oils, probably would be stronger in 1940-41 than in 1939-40. But it was pointed out that if the British blockade of continental Europe were continued, abnormally large supplies of such foreign items as coconut oil and copra, palm oil, palm kernels, and flaxseed would remain available for shipment to the United States. Under such circumstances, it was stated, any rise in prices for domestic fats would be limited by increased imports. Nevertheless, some improvement in prices for lard, tallow, and greases seemed to be indicated on the basis of the probable domestic supply and demand situation.

At the time the above forecast was prepared, the full extent of world shipping losses was not foreseen. Only about one-fourth of the foreign trade of the United States in recent years has been carried in United States vessels. Hence, as world shipping was depleted, and as foreign vessels were withdrawn from American service, the ability of importers to obtain supplies of foreign oilseeds and oils was reduced. Shipping space is now difficult to obtain, and probably will become more limited in the next several months. The scarcity of shipping space, in most instances, has prevented any increase in imports of oilseeds and oils. And it seems probable that prices of domestic fats and oils, which are now somewhat higher than they were a year ago, will continue strong during the remainder of this year.

Prices for domestic oilseeds in the 1941-42 marketing year are expected to average higher than in 1940-41, even if production should be increased. The growing strength in domestic demand plus the probability that imports will be reduced will more than offset the effect on prices of any increase in domestic production that may take place this year. Normally, 10 to 15 percent of our total fat supply is imported, mostly in the form of vegetable oilseeds and oils.

UTILIZATION OF FATS AND OILS IN THE DRYING INDUSTRIES

As indicated in tables 2 and 3, approximately 796 million pounds of fats and oils were used in paints, varnishes, linoleum, oilcloth, and printing inks in 1940. This was a reduction of 17 million pounds (2 percent) from the total consumption of fats in the drying industries in 1939. Consumption of tung oil, perilla oil, and oiticica oil was reduced. On the other hand, the use of linseed oil from domestic flaxseed, castor oil, soybean oil, and fish oils was increased.

Approximately 56 percent of the total volume of fats and oils used in the drying industries in 1940 was of domestic origin compared with 39 percent of the total a year earlier and 27 percent of the total, on the average, for the preceding 5 years. Increased domestic output and decreased imports of flaxseed, together with sharply reduced supplies of Chinese tung oil and Japanese perilla oil, were mainly responsible for the marked gain in the proportion of domestic oils used for drying purposes during the past 2 years.

Linseed oil accounted for approximately 72 percent of the total utilization of fats and oils in the drying industries in 1940, well maintaining the lead which it has held in this field for many years. Tung oil continued in second place, in terms of volume, although accounting for only 8 percent of the total utilization in 1940 compared with 13 percent in 1939 and an average of 16 percent in the preceding 5 years. Perilla oil, however, dropped from third to sixth place in importance in 1940, with fish oils, soybean oil, and castor oil (chiefly dehydrated) moving up the scale. About 2 percent of the total fats and oils used in the drying industries in 1940 was oiticica oil, and 1 percent miscellaneous fats and oils. (Table 7.)

Paint and varnish industry principal consumer of drying oils

The paint and varnish industry accounted for 83 percent of the total utilization of drying oils in 1940, with an estimated consumption, including the use of oils by painters and others in mixing or thinning paints on the job, of 663 million pounds. Approximately 112 million pounds, or 14 percent of the total for all drying industries, were used in the manufacture of linoleum and oilcloth, and 21 million pounds, or 3 percent of the total, were used in the manufacture of printing inks.

Consumption of fats and oils in the paint and varnish industry was about 20 million pounds smaller in 1940 than in 1939. Use in printing inks also was less than a year earlier. However, a gain of about 4 million pounds in utilization was reported by linoleum and oilcloth manufacturers. (Tables 4-6.)

Increased consumption of paint oils indicated for 1941

Industrial production is now at a record level and building activity has reached the highest peak in more than 10 years. Both industrial production and building activity are expected to continue at high levels at least through 1941. As a result, consumption of drying oils probably will be considerably larger this year than last. Supplies of tung and perilla oils, however, are likely to be smaller than they were a year ago; hence, the increase in use of drying oils probably will come largely in linseed oil. Increased utilization of dehydrated castor oil, soybean oil, and fish oils for drying purposes also is indicated.

During the first quarter of 1941, the total apparent disappearance of tung oil was 19 million pounds, 14 percent more than in the first quarter of 1940. But 14 million pounds of this total were derived from stocks, which on

March 31 were reported at only 43 million pounds. With much smaller imports of tung oil in prospect this year than last, and with comparatively little being produced domestically, the rate of consumption for tung oil established in the first quarter probably cannot be maintained throughout the year unless stocks are to be almost entirely depleted.

Imports and consumption of perilla oil and oiticica oil in the first quarter this year were at very low levels. On the other hand, total disappearance of linseed oil, amounting to 156 million pounds, was 32 percent greater than a year earlier. And consumption of castor oil, totaling 33 million pounds, was 38 percent greater than a year earlier. Although no breakdown of total use of fats and oils by industries for 1941 is now available, most of the increase in castor-oil consumption in the first quarter probably occurred in the drying industries, where dehydrated castor oil is being used as a tung-oil substitute.

Large supply of flaxseed available in South America

As indicated in table 8, production of flaxseed in Argentina and Uruguay in 1940-41 is officially estimated at about 64 million bushels compared with 45 million bushels a year earlier. Because of the loss of important European markets, and the large crop in this country in 1940, only about 10 percent of the 1941 exportable surplus of flaxseed in South America has been exported to date.

The United States now has sufficient flaxseed on hand to meet crushing requirements until the new domestic crop becomes available. But some flaxseed probably will be imported through the balance of the year to meet the needs of eastern mills and part of the crushing requirements in the first half of 1942. The volume of imports during the next 12 months will depend on at least three factors: (1) The size of the domestic crop in 1941; (2) the rate of crushing activity; and (3) the availability of ocean shipping space. Imports during the first 3 months of 1941 totaled nearly 4 million bushels. However, such imports probably will not be maintained at as high a rate in coming months.

Table 2.- Estimated consumption of principal oils in the drying industries according to origin of raw materials, United States, 1931-40

Year	Linseed oil 1/		Tung oil		Perilla oil, imported	Fish oil, domestic	Soybean oil, domestic	Oiticica oil, imported 3/
	Imported	Domestic	Imported	Domestic 2/				
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
1931	239	232	90	---	11	27	9	---
1932	158	196	74	---	11	20	11	---
1933	242	134	102	4/	25	22	14	---
1934	304	105	112	---	24	25	13	---
1935	312	153	124	4/	60	33	18	---
1936	305	173	115	---	105	40	17	3
1937	471	100	141	2	39	44	17	4
1938	325	155	86	1	41	30	19	5
1939	305	244	100	3	51	42	28	19
1940 5/	216	359	66	1	19	46	37	16

Year	Castor oil, imported	Other fats and oils		All fats and oils			Imports as percentage of total
		Imported	Domestic	Imported	Domestic	Total	
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
1931	2	1	1	343	269	612	56.0
1932	2	1	1	246	228	474	51.9
1933	2	2	1	373	171	544	68.6
1934	2	3	1	445	144	589	75.6
1935	4	3	1	503	205	708	71.0
1936	5	12	1	545	231	776	70.2
1937	8	3	1	666	164	830	80.2
1938	7	3	1	467	206	673	69.4
1939	12	8	1	495	318	813	60.9
1940 5/	25	10	1	352	444	796	44.2

Compiled as follows:

Linseed, tung, and perilla oils -

Total domestic disappearance, excluding small quantities reported by the Bureau of the Census as used in soap, shortenings, and miscellaneous products.

Oiticica oil -

Imports for consumption, Bureau of Foreign and Domestic Commerce.

All other fats and oils -

Factory consumption in paints, varnishes, linoleum, oilcloth, and printing inks, Bureau of the Census.

1/ Net imports of flaxseed were taken as a percentage of total domestic crushings to obtain an indication of the proportion of linseed oil consumption allocated to imports.

2/ Estimates of domestic production.

3/ Not separately reported prior to 1936.

4/ Less than 500,000 pounds.

5/ Preliminary.

Table 3.- Estimated total consumption of fats and oils in the drying industries, United States, 1936-40

Item	1936	1937	1938	1939	1940 1/
	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.
Linseed oil 2/	478,026	570,788	479,813	548,876	575,416
Tung oil 2/	115,125	143,470	87,405	103,051	66,886
Perilla oil 2/	105,260	38,776	41,487	50,960	19,011
Fish oil	39,636	44,340	29,781	42,570	45,967
Soybean oil	17,419	17,157	18,847	28,220	37,164
Castor oil	4,794	7,722	6,043	11,844	24,857
Oiticica oil 3/	2,892	3,631	5,301	18,867	15,537
Coconut oil	772	1,126	424	710	1,263
Cottonseed oil	49	210	352	243	217
Rape oil	181	139	134	79	88
Corn oil	123	89	118	155	174
Palm oil	3	3	10	6	4
Olive oil, inedible	---	---	6	14	7
Sunflower oil	97	4/	4/	4/	4/
Other vegetable oil 5/	11,372	1,524	2,133	7,158	9,062
Grease	562	659	565	497	504
Tallow, inedible	142	158	121	102	155
Marine mammal oil	28	18	33	40	55
Neatsfoot oil	8	16	11	28	28
Tallow, edible	2	2	2	1	1
Lard	5	3	2	2	9
Oleo oil	---	---	2	---	---
Oleostearine	---	---	---	2	6
Total	776,496	829,831	672,590	813,425	796,411

Compiled from reports of the Bureau of the Census, except as otherwise noted. Data for earlier years beginning 1931 are given in The Fats and Oils Situation for May 1939.

1/ Preliminary.
2/ Since drying oils are used directly as well as in factory consumption, these figures represent total domestic disappearance excluding small quantities reported by the Bureau of the Census as used in soap, shortening, and miscellaneous products.
3/ Imports for consumption from official records of the Bureau of Foreign and Domestic Commerce.
4/ If any, included with "other vegetable oil."
5/ May include some oiticica oil; hence some duplication.

Table 4.- Estimated consumption of fats and oils in paints and varnishes, United States, 1936-40

Item	1936	1937	1938	1939	1940 1/
	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.
Linseed oil 2/	412,982	482,295	407,614	463,327	474,046
Tung oil 2/	105,663	133,510	81,190	97,183	63,094
Perilla oil 2/	85,603	28,971	32,773	38,287	15,516
Fish oil	23,166	27,277	15,679	24,981	30,787
Soybean oil	14,471	16,143	15,183	21,720	29,828
Castor oil	4,118	7,192	5,792	11,439	24,368
Oiticica oil 3/	2,892	3,631	5,301	18,867	15,537
Coconut oil	771	1,124	422	707	1,261
Cottonseed oil	34	43	184	51	65
Rape oil	168	138	131	79	88
Corn oil	123	89	118	155	174
Palm oil	1	---	1	1	2
Olive oil, inedible	---	---	6	14	7
Sunflower oil	97	4/	4/	4/	4/
Other vegetable oil 5/	4,614	1,498	1,912	5,816	8,336
Grease	94	150	144	47	94
Tallow, inedible	135	151	117	97	141
Marine mammal oil	17	11	28	36	48
Neatsfoot oil	7	15	9	24	28
Oleo oil	---	---	2	---	---
Total	654,956	702,238	566,606	682,831	663,420

Compiled from reports of the Bureau of the Census, except as otherwise noted.

1/ Preliminary.
2/ Since linseed, tung, and perilla oils are used directly as well as in factory consumption, these figures represent total domestic disappearance excluding quantities reported by the Bureau of the Census as factory consumption in linoleum, oilcloth, and printing ink, and small quantities used in soap, shortening, and miscellaneous products.
3/ Imports for consumption, from official records of the Bureau of Foreign and Domestic Commerce.
4/ If any, included with "other vegetable oil".
5/ May include some oiticica oil; hence, some duplication.

Table 5.- Factory consumption of fats and oils in the manufacture of linoleum and oilcloth, United States, 1936-40

Item	1936	1937	1938	1939	1940 1/
	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.
Linseed oil	50,076	68,151	55,395	68,023	84,262
Fish oil	16,235	16,765	13,848	17,385	15,001
Perilla oil	17,717	8,053	6,952	10,758	2,387
Tung oil	7,131	7,198	4,131	3,763	2,064
Soybean oil	2,886	934	3,605	6,438	7,254
Castor oil	518	270	51	88	137
Rape oil	13	---	2	---	---
Other vegetable oil	6,758	9	115	1,264	706
Grease	---	---	1	1	---
Tallow, inedible	---	---	---	1	2
Total	101,334	101,380	84,100	107,721	111,813

Compiled from reports of the Bureau of the Census.

1/ Preliminary.

Table 6.- Factory consumption of fats and oils in the manufacture of printing inks, United States, 1936-40

Item	1936	1937	1938	1939	1940 1/
	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.
Linseed oil	14,968	20,342	16,804	17,526	17,108
Tung oil	2,331	2,762	2,084	2,105	1,728
Perilla oil	1,940	1,752	1,762	1,915	1,108
Fish oil	235	298	254	204	179
Castor oil	158	260	200	317	352
Cottonseed oil	15	167	168	192	152
Soybean oil	62	80	59	62	82
Palm oil	2	3	9	5	2
Rape oil	---	1	1	---	---
Coconut oil	1	2	2	3	2
Other vegetable oil	---	17	106	78	20
Grease	468	509	420	449	410
Marine mammal oil	11	7	5	4	7
Tallow, inedible	7	7	4	4	12
Tallow, edible	2	2	2	1	1
Lard	5	3	2	2	9
Neat's-foot oil	1	1	2	4	---
Oleostearine	---	---	---	2	6
Total	20,206	26,213	21,884	22,873	21,178

Compiled from reports of the Bureau of the Census.

1/ Preliminary.

Table 7.- Percentage contribution of principal items to the total weight of fats and oils used in the drying industries, United States, 1931-40

Item	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940 1/
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
	Total drying industries									
Linseed oil	77.1	74.6	69.0	69.4	65.7	61.6	68.8	71.3	67.5	72.3
Tung oil	14.7	15.7	18.8	18.9	17.5	14.8	17.3	13.0	12.7	8.4
Perilla	1.8	2.4	4.6	4.0	8.5	13.6	4.7	6.2	6.3	2.4
Fish oil	4.4	4.1	4.1	4.2	4.6	5.1	5.3	4.4	5.2	5.8
Soybean oil	1.5	2.4	2.6	2.3	2.5	2.2	2.1	2.8	3.5	4.7
Castor oil	.3	.3	.5	.5	.5	.6	.9	.9	1.5	3.1
Oiticica oil	---	---	---	---	---	.4	.4	.8	2.3	2.0
Other fats and oils	.2	.5	.4	.7	.7	1.7	.5	.6	1.0	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Paint and varnish									
Linseed oil	78.4	76.9	72.0	72.0	67.2	63.1	68.7	71.9	67.9	71.5
Tung oil	15.6	16.3	19.3	19.2	18.4	16.1	19.0	14.3	14.2	9.5
Perilla oil	2.0	2.3	4.1	3.7	8.2	13.1	4.1	5.8	5.6	2.3
Fish oil	2.3	1.9	1.9	2.3	3.0	3.5	3.9	2.8	3.7	4.6
Soybean oil	1.2	1.8	1.9	2.1	2.1	2.2	2.3	2.7	3.2	4.5
Castor oil	.3	.4	.4	.5	.6	.6	1.0	1.0	1.7	3.7
Oiticica oil	---	---	---	---	---	.4	.5	.9	2.8	2.3
Other fats and oils	.2	.4	.4	.2	.5	1.0	.5	.6	.9	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Linoleum and oilcloth									
Linseed oil	65.2	56.3	47.2	47.3	51.7	49.4	67.2	65.9	63.1	75.4
Fish oil	20.2	20.8	18.9	19.6	17.2	16.0	16.5	16.5	16.1	13.4
Perilla oil	1.0	2.9	8.3	6.6	11.9	17.5	7.9	8.3	10.0	2.1
Tung oil	9.9	12.7	16.8	19.0	12.9	7.0	7.1	4.9	3.5	1.8
Soybean oil	3.6	7.1	8.1	4.2	6.0	2.8	.9	4.3	6.0	6.5
Other fats and oils	.1	.2	.7	3.3	.3	7.3	.4	.1	1.3	.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Printing inks									
Linseed oil	88.7	87.0	81.0	81.1	79.3	74.1	77.6	76.8	76.6	80.8
Tung oil	7.3	6.8	11.3	10.7	11.2	11.5	10.5	9.5	9.2	8.2
Perilla oil	.3	1.4	3.1	3.7	4.6	9.6	6.7	8.1	8.4	5.2
Other fats and oils	3.7	4.8	4.6	4.5	4.9	4.8	5.2	5.6	5.8	5.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Computed from data shown in preceding tables and from similar data given in The Fats and Oils Situation for May 1939.

1/ Preliminary.

Table 8.- Flaxseed: Production in specified countries and estimated world total excluding U.S.S.R. and China, 1925-40

Year	Estimated world total, excl. U.S.S.R. and China	Argentina	British India 1/	United States	Uruguay	Canada
	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.
1925	137,000	75,113	21,160	22,334	2,030	6,237
1926	133,000	80,783	17,080	18,531	1,970	5,995
1927	140,000	82,672	17,440	25,174	1,954	4,885
1928	126,000	78,377	15,080	19,118	2,030	3,614
1929	96,000	50,004	14,080	15,924	3,216	2,060
1930	136,000	78,342	16,840	21,673	5,056	4,399
1931	132,000	89,067	16,640	11,755	4,841	2,465
1932	101,000	62,006	18,160	11,511	1,475	2,719
1933	97,000	62,595	17,600	6,904	2,876	632
1934	113,000	79,720	16,080	5,661	3,402	910
1935	106,000	59,445	17,920	14,520	3,007	1,667
1936	115,000	77,864	16,640	5,273	3,011	1,795
1937	101,000	61,013	17,800	7,089	3,728	775
1938	98,000	55,509	19,480	8,152	4,427	1,259
1939	96,000	39,935	18,760	20,152	4,694	2,169
1940 2/		61,689	18,680	31,127	2,638	3,189

Compiled from official sources and reports of the International Institute of Agriculture. Available data for most flaxseed-producing countries for years beginning 1909 are given in The Fats and Oils Situation for January 1940.

1/ Reported production plus Indian official estimates for unreported tracts.

2/ Preliminary.

Table 9.- Perilla seed: Production in Manchuria and Chosen, 1933-40

Year	Manchuria	Chosen
	1,000 lb.	1,000 lb.
1933	110,230	12,297
1934	138,685	11,204
1935	400,433	10,508
1936	323,708	10,550
1937	265,154	11,080
1938	203,293	10,255
1939	143,299	1/
1940	2/ 83,000	1/

Compiled from official sources. In addition to the above, production in Japan is reported to total about 400,000 pounds annually. Production in other countries is negligible.

1/ Not available.

2/ Preliminary, trade estimate.

Table 10.- Tung oil: Exports from China, by countries of destination, 1925-40 1/

Year	Total	United States 2/	Hong Kong	Germany	United Kingdom	France	Nether-lands	Japan 3/
	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.
1925	119,210	94,146	3,871	8,463	5,145	1,897	1,388	801
1926	99,758	72,002	7,138	6,134	6,488	2,671	2,075	1,024
1927	120,173	76,309	17,824	7,253	5,957	1,825	7,680	877
1928	145,907	98,699	18,449	5,718	13,316	2,294	3,443	1,061
1929	142,620	98,053	16,649	3,192	11,205	3,339	4,419	2,634
1930	155,634	116,534	7,390	4,809	12,564	4,106	4,908	1,437
1931	115,315	73,280	11,144	3,673	13,284	2,127	6,062	1,143
1932	107,036	66,106	10,985	2,578	11,471	2,304	7,914	919
1933	166,246	117,213	14,951	3,169	10,115	4,950	9,070	1,319
1934	143,924	90,475	19,080	4,959	6,902	7,021	6,848	2,047
1935	162,890	108,466	19,286	6,379	8,058	6,868	4,543	1,740
1936	191,223	137,317	13,265	9,470	8,344	8,144	3,621	2,231
1937	227,027	141,343	46,818	9,438	8,119	8,190	1,323	1,646
1938	153,391	12,538	123,039	3,264	4,467	2,380	774	123
1939	73,858	1,538	66,284	626	1,375	11	233	63
1940 4/	51,251	9,215	33,837	---	2,244	163	---	69

Year	Den-mark	Norway	Sweden	Aus-tralia 5/	Belgium	Italy	Argentina	Other countries 6/
	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.
1925	350	90	129	388	355	594	---	1,593
1926	322	181	201	196	443	504	---	379
1927	452	254	321	6	459	733	---	223
1928	745	356	370	136	303	751	---	266
1929	646	269	347	235	---	903	---	749
1930	960	668	392	257	---	845	---	764
1931	1,588	507	562	292	---	735	---	918
1932	1,437	810	364	431	459	528	12	718
1933	1,443	795	327	493	898	583	34	886
1934	1,665	1,218	657	547	841	736	88	840
1935	1,755	1,009	957	791	638	1,187	278	935
1936	1,922	1,506	1,377	1,364	1,016	306	297	1,043
1937	1,098	1,072	1,043	1,254	740	1,148	219	3,576
1938	377	66	320	128	340	250	56	5,269
1939	269	4	207	2	53	240	7	2,946
1940 4/	22	7/	22	---	5	212	---	5,462

Compiled from Trade of China (annual), 1925-39; Monthly Trade of China, 1940.

1/ Includes Manchuria prior to July 1, 1932. 2/ Includes Hawaii prior to 1932.
3/ Includes Taiwan. 4/ Preliminary. 5/ Includes New Zealand.
6/ Includes British India, Finland, French Indochina, Kwantung, Danzig, Poland, Canada, Spain, Netherlands Indies, Straits Settlement, Union of South Africa, Macao, and Kwangchowwan Leased Territory.
7/ If any, included in other countries.

Table 11.- Wholesale prices of fats and oils: Index numbers, April 1939 and 1940, February - April 1941

(1924-29 = 100)

Group	April		1941		
	1939	1940	Feb.	Mar.	Apr.
Eight domestic fats and oils 1/	75	84	88	93	104
Eight domestic fats and oils	53	59	63	66	74
All fats and oils (27 items)	56	64	68	72	79
Grouped by origin					
Animal fats	50	59	64	67	73
Marine animal oils	71	89	93	99	105
Vegetable oils, domestic	66	71	65	71	84
Vegetable oils, foreign	77	89	96	103	114
Grouped by use					
Butter, unadjusted	50	62	68	70	74
Butter, adjusted 2/	53	65	66	68	78
Lard	48	47	47	54	65
Food fats, other	66	67	70	78	93
Soap fats	66	65	66	75	90
Drying oils	79	102	95	99	105
Miscellaneous oils	64	100	85	86	88

1/ 1910-14 = 100. 2/ Adjusted for typical seasonal variation.

Table 12.- Prices of specified oil-bearing materials, April 1939 and 1940, February - April 1941

Item	Unit	April		1941		
		1939	1940	Feb.	Mar.	Apr.
		Dollars	Dollars	Dollars	Dollars	Dollars
Castor beans, Brazilian, ship't., c.&f., New York	Long ton	---	70.00	51.00	55.25	58.50
Copra, bags, f.o.b. Pacific Coast	100 lb.	1.79	1.74	1.82	2.38	3.01
Cottonseed, Dallas	Short ton	23.00	26.50	---	---	---
Cottonseed, U.S. farm price	" "	22.95	27.18	24.61	24.81	25.88
Flaxseed, No. 1, Minneapolis	Bushel	1.89	2.11	1.75	1.80	1.93
Flaxseed, U.S. farm price	"	1.64	1.91	1.52	1.53	1.73
Peanuts, shelled, Runners No. 1, S.E. mills	100 lb.	4.88	5.15	5.25	5.30	5.40
Peanuts, U.S. farm price	"	3.42	3.53	3.39	3.46	3.62
Soybeans, No. 2 Yellow, Chicago	Bushel	.89	1.09	.95	1.04	1.20
Soybeans, U.S. farm price	"	.78	1.00	.84	.89	1.07

Compiled from Oil, Paint and Drug Reporter, Daily Trade Bulletin (Chicago), Daily Market Record (Minneapolis), and reports of the Agricultural Marketing Service.

Table 13.- Price per ton of specified oilcake meals, April 1939 and 1940, February-April, 1941

Item 1/	April		1941		
	1939	1940	February	March	April
	Dollars	Dollars	Dollars	Dollars	Dollars
Copra meal, Los Angeles ...	23.25	18.95	24.40	25.25	30.80
Cottonseed meal, 41 percent protein, Memphis	23.20	30.80	24.45	24.45	25.20
Cottonseed meal, 41 percent protein, Chicago	28.95	36.95	31.25	30.75	31.25
Linseed meal, 37 percent protein, Minneapolis	38.00	30.70	28.40	27.40	28.50
Linseed meal, 34 percent protein, New York	2/ 40.20	34.00	23.90	23.10	24.60
Peanut meal, 45 percent protein, f.o.b. southeastern mills	20.75	30.85	20.69	20.88	24.20
Soybean meal, 41 percent protein, Chicago	24.70	29.65	26.60	26.85	27.50

Compiled from records of the Agricultural Marketing Service.

1/ Bagged, carlots, except for peanut meal.
2/ 30-32 percent protein.

Table 14.- Oleomargarine: Production and materials used in manufacture, United States, March 1939 and 1940, January-March 1941

Item	March		1941 1/		
	1939	1940	January	February	March
	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.
Production:					
Colored	137	138	2/ 412	337	291
Uncolored	29,210	26,523	33,618	27,765	33,589
Total 3/	29,348	26,661	34,030	28,103	33,880
Materials used:					
Oleo oil	1,326	1,317	1,788	1,161	1,561
Oleostearine	271	242	227	253	282
Lard, neutral	112	301	777	504	899
Oleo stock	95	96	158	120	133
Monostearine	---	---	16	11	15
Total animal	1,804	1,956	2,966	2,049	2,890
Cottonseed oil	9,678	9,022	13,451	11,626	13,142
Soybean oil	5,452	7,169	9,460	7,394	9,456
Peanut oil	203	146	200	163	165
Corn oil	51	87	37	39	39
Vegetable gum	---	1	---	---	---
Cottonseed stearine	---	---	---	---	1
Soybean stearine	---	---	---	2	---
Total domestic vegetable	15,384	16,425	23,148	19,224	22,803
Coconut oil	4,729	2,464	1,281	1,296	1,424
Babassu oil	1,596	526	---	62	66
Palm-kernel oil	173	---	---	---	---
Palm oil	---	1	---	---	1
Total foreign vegetable	6,498	2,991	1,281	1,358	1,491
Total fats and oils	23,686	21,372	27,395	22,631	27,184
Milk	5,861	5,074	6,227	5,348	6,414
Salt and other miscellaneous	1,316	1,166	1,353	1,088	1,305

Compiled from Internal Revenue records and Internal Revenue Bulletin.

1/ Preliminary.

2/ Includes manufacturers' returns not available for other reports.

3/ Total of unrounded numbers.

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